AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listing, of claims in the application:

Listing of Claims:

1. (currently amended) A datagram transmission device wherein[[;]]:

a combination of attribute information types employed for transmission control is searched using a destination address of a received datagram;

an identification key is generated using a value of the attribute information which corresponds to the attribute information types of the search combination is stored in a the received datagram and is used for transmission control;

a transmission control rule corresponding to said identification key is selected from a transmission control rule list;

and transmission of said datagram is controlled in accordance with the selected transmission control rule.

2. (currently amended) The datagram transmission device according to claim 1 comprising:

an attribute information searching meanssearcher that searches combinations ofdecides attribute information types employed for transmission control by searching from combinations of attribute information types a combination corresponding to using the destination address of the received datagram;

an identification key generation meansgenerator that reads from said the datagram said attribute information contained incorresponding to the search result of said attribute information searching meanssearcher and generates said identification key which contains the destination address and the value of said attribute information corresponding to the value of said attribute information that has been read;

a transmission control decision meansselector that selects on a transmission control rule using said identification key generated by said identification key generation meansgenerator; and

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transmission ~~control execution means~~controller that controls transmission in accordance with a transmission control rule selected by said transmission control ~~decision means~~controller.

3. (currently amended) The datagram transmission device according to claim 2 wherein said attribute information ~~searching means~~searcher comprises:

an information table that stores information indicating combinations of said attribute information types; and

an address ~~searching means~~searcher that searches ~~the~~indexes of said information table using said destination address.

4. (currently amended) The datagram transmission device according to claim 3 wherein said identification key ~~generation means~~generator generates said identification key including an~~said~~ index obtained by the searching of said address ~~searching means~~searcher.

5. (currently amended) The datagram transmission device according to claim 2 wherein said identification key ~~generation means~~generator generates said identification key using a compressed value of the value of said attribute information of one or more types.

6. (currently amended) The datagram transmission device according to claim 2 wherein said transmission control ~~decision means~~selector comprises:

an action table that stores a plurality of types of execution content of said transmission control; and

hash ~~searching means~~searcher that searches the indexes of said action table by hash searching using said identification key.

7. (currently amended) The datagram transmission device according to claim 3 wherein said information ~~tables~~table stores destination address execution information that indicates the execution content when said transmission control is only transmission; and

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said transmission ~~control execution means~~controller executes said transmission when said destination address execution information has been input.

8. (currently amended) The datagram transmission device according to claim 2 wherein said attribute information of at least one or more types is information belonging to the fourth layer or a layer thereabove of the ~~protocol~~Open Systems Interconnection (OSI) reference model.

9. (currently amended) The datagram transmission device according to claim 2 wherein said attribute information ~~searching means~~searcher searches combinations of said attribute information using information belonging to the second layer of the ~~protocol~~Open Systems Interconnection (OSI) reference model and said destination address.

10. (currently amended) The datagram transmission device according to claim 9 wherein said information belonging to the second layer of the ~~protocol~~OSI reference model is a~~an~~ virtual channel identifier of the asynchronous transfer mode.

11. (currently amended) The datagram transmission device according to claim 1 comprising:
an attribute information ~~conversion means~~converter that reads a value of one or more types of attribute information ~~of one or a plurality of types~~ from a received datagram, individually determines an index value corresponding to the value of these items of attribute information and outputs one or a plurality of said index values obtained by said determination as respective conversion results;
an identification key ~~generation means~~generator that generates an identification key including said index value input from said attribute information ~~conversion means~~converter;
a transmission control ~~decision means~~selector that decides on the execution content of transmission control using said identification key generated by said identification key ~~generation means~~generator; and

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a transcription ~~control execution means~~controller that executes transmission control decided upon by said transmission control ~~decision means~~selector.

12. (currently amended) The datagram transmission device according to claim 11 wherein said attribute information ~~conversion means~~converter comprises a conversion table that stores the correspondence relationship of the values of said attribute information and said index values, for each type of said attribute information.

13. (currently amended) The datagram transmission device according to claim 11 wherein said transmission control ~~decision means~~selector comprises:

an action table that stores a plurality of types of execution content of said transmission control; and

a hash ~~searching means~~searcher that searches the indexes of said action table by hash searching using said identification key.

14. (currently amended) The datagram transmission device according to claim 11 further comprising an source address ~~conversion means~~converter that converts the source address read from a received datagram into an index value by a prescribed method and sends this to said identification key ~~generation means~~generator; and

wherein said identification key generation means generates said identification key including said index value input from said source address conversion means.

15. (currently amended) The datagram transmission device according to claim 11 further comprising a destination address ~~conversion means~~converter that converts the destination address read from a received datagram into an index value by a prescribed method and sends this to said identification key ~~generation means~~generator; and

wherein said identification key ~~generation means~~generator generates said identification key including said index value input from said destination address ~~conversion means~~converter.

16. (currently amended) The datagram transmission device according to claim 15 wherein;

said destination address ~~conversion means~~converter determines whether or not said destination address corresponds to a destination address in respect of which, as transmission control, only transmission is performed, and, if it corresponds, outputs transmission execution information to said transmission ~~control execution means~~controller; and

wherein said transmission ~~control execution means~~controller executes transmission control using said transmission execution information in the case of said transmission ~~control execution means~~controller input said transmission execution information.

17. (currently amended) The datagram transmission device according to claim 15 wherein said destination address ~~conversion means~~ converter converts a combination of information belonging to the second layer of the ~~protocol~~Open Systems Interconnection (OSI) reference model and said destination address to said index value.

18. (currently amended) The datagram transmission device according to claim 17 wherein said information belonging to the second layer of the ~~protocol~~OSI reference model is ~~an~~ a virtual channel identifier of the asynchronous transfer mode.

19. (original) The datagram transmission device according to claim 1 wherein said datagram transmission device is an Internet protocol router.

20. (original) The datagram transmission device according to claim 1 wherein said datagram transmission device is an Internet protocol switch.

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